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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/737,191	12/14/2000	Donald Prentice Satchell JR.	M00A401	9168

7590

12/16/2004

Philip H. Von Neida  
Intellectual Property Dept.  
The BOC Group Inc.  
100 Mountain Ave.  
Murray Hill, NJ 07974

EXAMINER
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NGUYEN, NGOC YEN M

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/737,191

Applicant(s)

SATCHELL ET AL.

Examiner

Ngoc-Yen M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) 40-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

Applicant's election with traverse of Group I in the reply filed on 09/08/2003 is acknowledged. The traversal is on the ground(s) that examination of Group II would not present an undue burden on the Patent Office. This is not found persuasive because the search for Group II is different than that of Group I as stated in the previous office action.

The requirement is still deemed proper and is therefore made FINAL.

Claims 41-49 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 09/08/2003.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-39 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for decreasing the effective acidity melt value by using different ammonium acid fluoride in a series of reactors, does not reasonably provide enablement for decreasing the effectively melt value by passing a gaseous mixture of fluorine and hydrogen fluoride through a bulk liquid ammonium acid fluoride. The specification does not enable any person skilled in the art to which it pertains, or

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with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

In the specification, it is disclosed that the decrease effective melt acidity value is accomplished by forming a gaseous mixture of elemental fluorine and hydrogen fluoride. The gaseous mixture is contacted with a bulk liquid ammonium acid fluoride in a reaction zone for a time and under conditions sufficient to produce nitrogen fluoride. Due to the presence of the hydrogen fluoride in the gaseous feed, the initial effective melt acidity value in the reaction will be greater than the melt acidity value of the bulk liquid ammonium acid fluoride (note page 2 of the instant specification, lines 22-29). However, since "x", as in the formula  $\text{NH}_4\text{F}(\text{HF})_x$ , is defined as "the melt acidity value" (note page 2, lines 6-8), it is assumed that when the gaseous mixture of elemental fluorine and hydrogen is contacted with the bulk liquid, the bulk liquid ammonium acid fluoride  $\text{NH}_4\text{F}(\text{HF})_x$  would become "initial" ammonium acid fluoride  $\text{NH}_4\text{F}(\text{HF})_{x+a}$ , wherein "a" is the increase in the melt acidity. However, as shown in Reaction 4 (bottom of page 5 of the instant specification), when fluorine reacts with the ammonium acid fluoride, some of the ammonium acid fluoride would be decomposed to form nitrogen trifluoride and HF but the remaining ammonium acid fluoride still has the same "x", the effective melt acidity value". Thus, it is unclear how the decrease in the effective melt acidity value of the liquid ammonium acid fluoride can be obtained in this case.

Moreover, as stated in the instant specification, the gaseous mixture of fluorine and hydrogen fluoride is contacted with a bulk liquid ammonium acid fluoride "in a reaction zone for a time and under conditions sufficient to produce nitrogen trifluoride"

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(note page 2, lines 24-26), but there is no mentioned of the condition at which the melt acidity value is increased. If it is assumed that the presence of HF in the gaseous mixture would instantaneously cause the increase in the melt acidity value before the reaction between fluorine and the ammonium acid fluoride started, and it is assumed that somehow after the reaction between fluorine and the ammonium acid fluoride took place, the melt acidity value decreased, then it is unclear how come the by-product HF from the reaction (note Reaction 4) would not instantaneously react with the remaining ammonium acid fluoride to thereby increase the melt acidity value again.

Claims 7-39 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 7 and 18, it is required that the gaseous mixture of elemental fluorine and hydrogen fluoride be fed into a reaction zone containing a bulk ammonium acid fluoride. It appears that the contact between the gaseous mixture and the bulk ammonium acid fluoride would cause the effective melt acidity value to increase. However the term "initial" appears to be misleading, because the "bulk ammonium acid fluoride" was in the process first, the now claimed "initial effective melt acidity value of ammonium acid fluoride" is only come into existence after the feeding step.

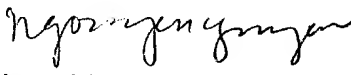
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc-Yen M. Nguyen whose telephone number is (571) 272-1356. The examiner is currently on Part time schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Stan Silverman be reached on (571) 272-1358. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed (571) 272-1700.

  
Ngoc-Yen M. Nguyen  
Primary Examiner  
Art Unit 1754

nmn  
December 13, 2004